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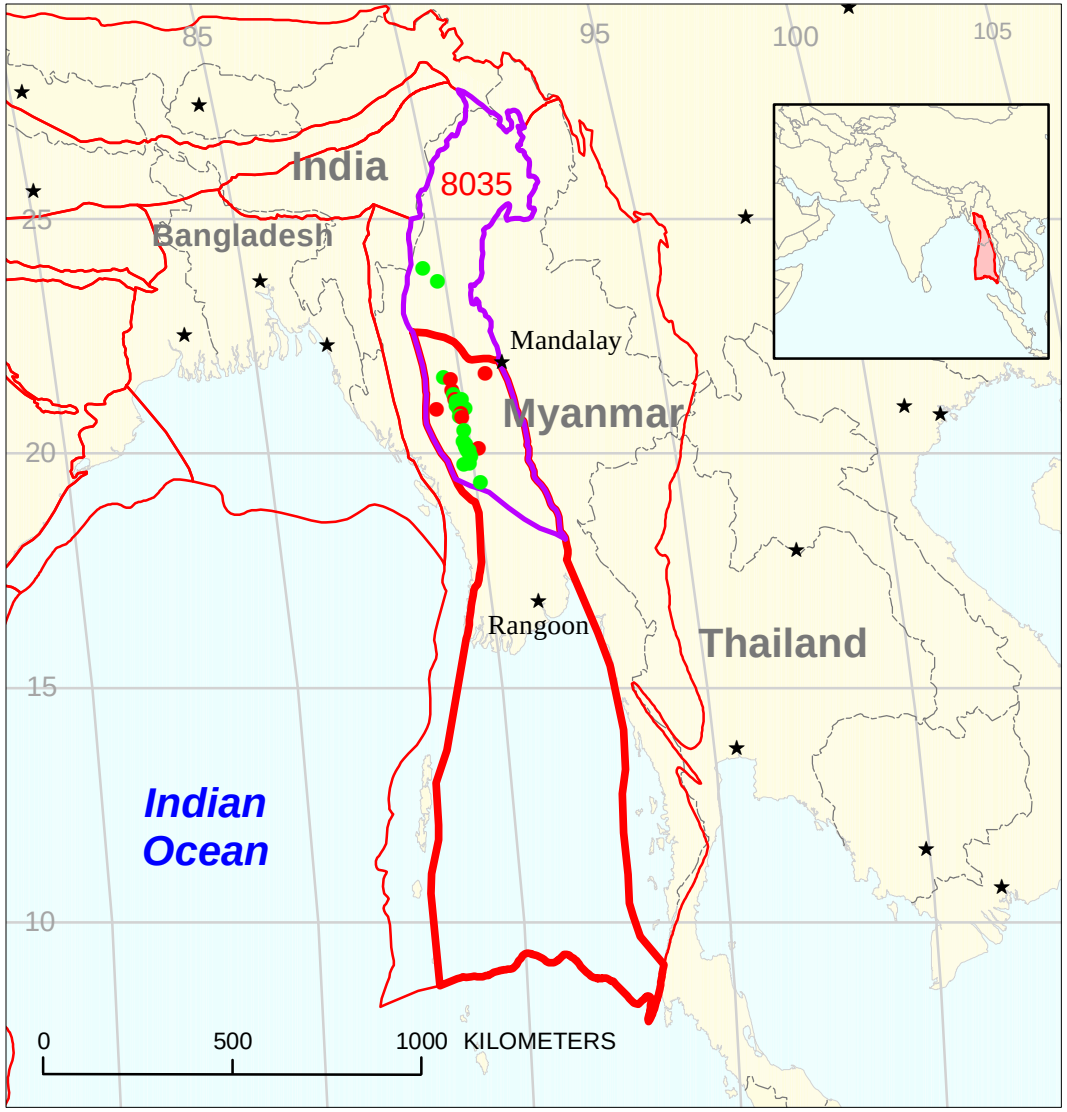
Central Burma Basin
Assessment Unit 80480101



Central Burma Basin Assessment Unit 80480101

Irrawaddy Geologic Province 8048

Other geologic province boundary

USGS PROVINCE: Irrawaddy (8048) Myanmar **GEOLOGIST:** C.J. Wandrey

TOTAL PETROLEUM SYSTEMS: Eocene to Miocene Composite (804801)

ASSESSMENT UNITS: Central Burma Basin (80480101)

DESCRIPTION: This assessment unit is located in the north and central basins of Myanmar. It is an oil prone onshore basin developed parallel to the converging continental and marine plate boundaries. The rocks that comprise this assessment unit include the Eocene Laungshe Shale, Tilin and Pondaung Sandstones, and the Oligocene-Miocene Pegu Group, which exceeds 6500 m. This group includes interbedded sandstones, shales, and coals of deltaic to fluvial facies, and shallow marine shales, limestones, and sandstones.

SOURCE ROCKS: Source rocks include the Upper Eocene-Lower Oligocene shales of the Yaw, Shwezetaw and Okhmintaung formations. Total organic carbon content is generally low where sampled (>1.7 percent). Organic content is primarily terrestrially sourced Type III kerogens.

MATURATION: Maturities are generally low from Ro 0.2 to 1.5 percent where sampled outside of this assessment unit to the south in the Gulf of Martaban.

GENERATION AND MIGRATION: The onset of generation probably occurred in late Miocene. Migration is primarily short, updip, and vertical through fault and fracture systems associated with the plate collision. These fault systems have been periodically reactivated through the present.

RESERVOIR ROCKS: Interbedded sandstones of the Pegu Group are the primary reservoirs. Permeability ranges from less than 32 mD to as high as 3200 mD. Porosity ranges from less than 20 percent to 30 percent. The Eocene Ponduang and Tilin sandstones may also have reservoir potential and have a combined thickness of as much as 3500 m. including the interbedded shales.

TRAPS AND SEALS: Traps include anticlines, faulted anticlines, fault truncations, and stratigraphic traps. Seals include interbedded Oligocene and Miocene shales and clays, and the thick clays of the Upper Miocene and Pliocene Irrawaddy Group. Structures in the Chindwin Basin area and stratigraphic traps developed in alluvial and deltaic systems have been only lightly explored and may have significant potential.

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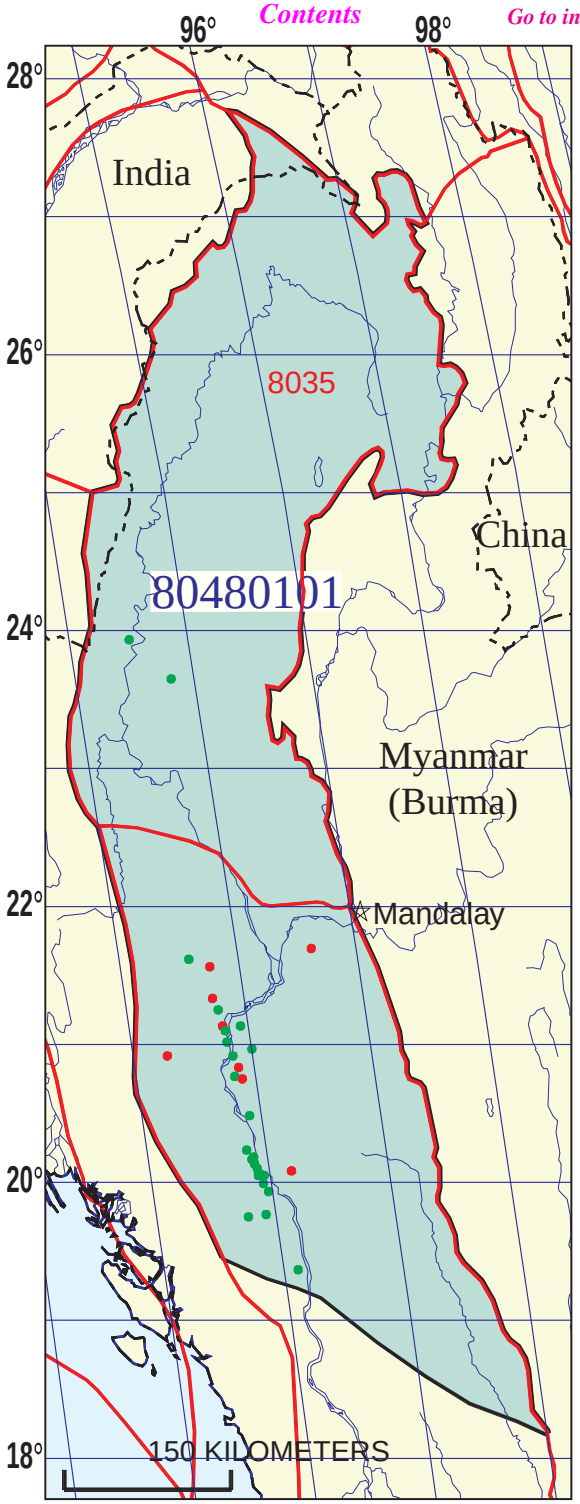

Central Burma Basin
Assessment Unit - 80480101

EXPLANATION

- Hydrography
- Shoreline
- 8048 Geologic province code and boundary
- Country boundary
- Gas field centerpoint
- Oil field centerpoint
- 80480101 Assessment unit code and boundary

Projection: Robinson. Central meridian: 0

SEVENTH APPROXIMATION
NEW MILLENNIUM WORLD PETROLEUM ASSESSMENT
DATA FORM FOR CONVENTIONAL ASSESSMENT UNITS

Date:……..	8/18/99		
Assessment Geologist:……..	C.J. Wandrey		
Region:……..	South Asia	Number:	8
Province:……..	Irrawaddy	Number:	8048
Priority or Boutique……	Boutique		
Total Petroleum System:……	Eocene to Miocene Composite	Number:	804801
Assessment Unit:……	Central Burma Basin	Number:	80480101
* Notes from Assessor	Lower 48-all growth function.		

CHARACTERISTICS OF ASSESSMENT UNIT

Oil (<20,000 cfg/bo overall) **or** Gas (≥20,000 cfg/bo overall):… Oil

What is the minimum field size?……. 1 mmboe grown (≥1mmboe)
(the smallest field that has potential to be added to reserves in the next 30 years)

Number of discovered fields exceeding minimum size:…… Oil: 12 Gas: 4
Established (>13 fields) X Frontier (1-13 fields) _____ Hypothetical (no fields) _____

Median size (grown) of discovered oil fields (mmboe):
1st 3rd 5.2 2nd 3rd 6.1 3rd 3rd _____
Median size (grown) of discovered gas fields (bcfg):
1st 3rd 83 2nd 3rd 60 3rd 3rd _____

Assessment-Unit Probabilities:

Attribute	Probability of occurrence (0-1.0)
1. **CHARGE:** Adequate petroleum charge for an undiscovered field ≥ minimum size……	1.0
2. **ROCKS:** Adequate reservoirs, traps, and seals for an undiscovered field ≥ minimum size……	1.0
3. **TIMING OF GEOLOGIC EVENTS:** Favorable timing for an undiscovered field ≥ minimum size	1.0

Assessment-Unit GEOLOGIC Probability (Product of 1, 2, and 3):…… 1.0

4. **ACCESSIBILITY:** Adequate location to allow exploration for an undiscovered field ≥ minimum size…… 1.0

UNDISCOVERED FIELDS

Number of Undiscovered Fields: How many undiscovered fields exist that are ≥ minimum size?:
(uncertainty of fixed but unknown values)

Oil fields:……min. no. (>0)	5	median no.	30	max no.	90
Gas fields:……min. no. (>0)	2	median no.	15	max no.	45

Size of Undiscovered Fields: What are the anticipated sizes (**grown**) of the above fields?:
(variations in the sizes of undiscovered fields)

Oil in oil fields (mmbo)……min. size	1	median size	6	max. size	500
Gas in gas fields (bcfg):……min. size	6	median size	30	max. size	900

Assessment Unit (name, no.)
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AVERAGE RATIOS FOR UNDISCOVERED FIELDS, TO ASSESS COPRODUCTS

(uncertainty of fixed but unknown values)

Oil Fields:	minimum	median	maximum
Gas/oil ratio (cfg/bo)……	1100	2200	3300
NGL/gas ratio (bngl/mmcfg)……	30	60	90

Gas fields:	minimum	median	maximum
Liquids/gas ratio (bngl/mmcfg)……	20	35	50
Oil/gas ratio (bo/mmcfg)……			

SELECTED ANCILLARY DATA FOR UNDISCOVERED FIELDS

(variations in the properties of undiscovered fields)

Oil Fields:	minimum	median	maximum
API gravity (degrees)……	17	34	51
Sulfur content of oil (%)……	0.01	0.03	0.23
Drilling Depth (m) ……	400	1600	3500
Depth (m) of water (if applicable)……			

Gas Fields:	minimum	median	maximum
Inert gas content (%)……			
CO_2 content (%)……			
Hydrogen-sulfide content (%)……			
Drilling Depth (m)……	400	1600	3500
Depth (m) of water (if applicable)……			

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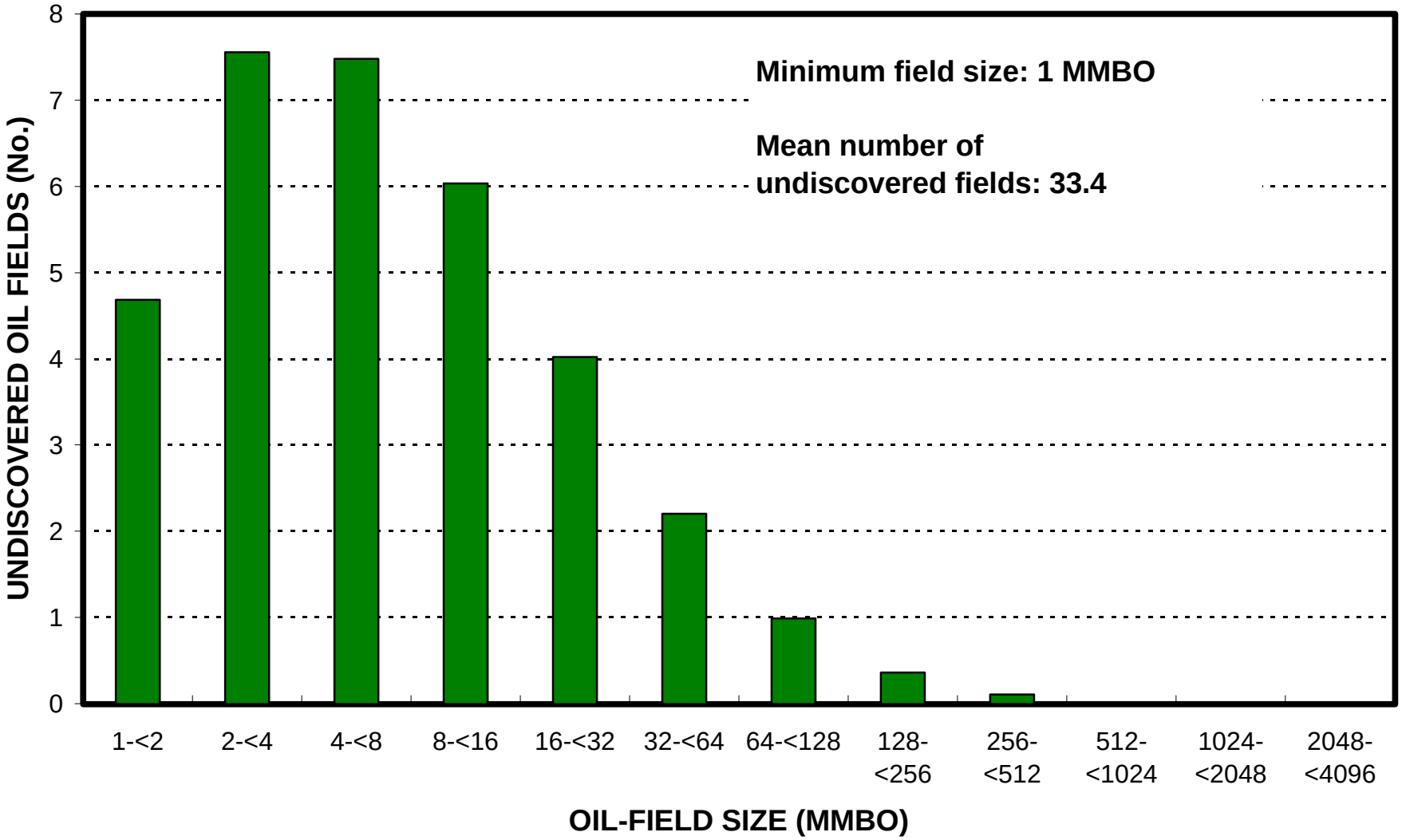
ALLOCATION OF UNDISCOVERED RESOURCES IN THE ASSESSMENT UNIT TO COUNTRIES OR OTHER LAND PARCELS (uncertainty of fixed but unknown values)

1. Myanmar represents 100 areal % of the total assessment unit

Oil in Oil Fields:	minimum	median	maximum
Richness factor (unitless multiplier):……			
Volume % in parcel (areal % x richness factor):…		100	
Portion of volume % that is offshore (0-100%)……		0	

Gas in Gas Fields:	minimum	median	maximum
Richness factor (unitless multiplier):……			
Volume % in parcel (areal % x richness factor):…		100	
Portion of volume % that is offshore (0-100%)……		0	

Central Burma Basin, AU 80480101
Undiscovered Field-Size Distribution



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Undiscovered Field-Size Distribution